

NOTES ABOUT VESCINAE, A KEY TO THE WORLD GENERA, AND  
DESCRIPTION OF TWO NEW *CHOPARDITA*  
(HETEROPTERA: REDUVIIDAE)

J. MALDONADO CAPRILES

Department of Crop Protection, University of Puerto Rico at Mayagüez, Mayagüez, Puerto Rico 00681; mailing address: Urb. Aponte 6 I 1, Cayey, Puerto Rico 00736.

---

*Abstract.*—New characters to separate Vescinae from all other Reduviidae subfamilies are discussed, a key to the World genera is presented, and the new African species *Chopardita granulosa* and *C. mimetica* are described.

*Key Words:* Vescinae, diagnosis, key to genera, *Chopardita granulosa*, *C. mimetica* new species, Reduviidae

---

China and Usinger (1948) remarked that the validity and coherence of Vescinae could be questioned. Their arguments were: a) the genitalia of the American *Vescia* Stål and the African *Chopardita* Villiers show close relationship whereas those of *Pessoia* Costa Lima are quite different; b) *Pessoia*, *Microvescia* Wygodzinsky and *Mirambulus* Breddin run to Peiratinae, c) all genera lack ocelli except *Mirambulus*, and d) *Vescia* and *Chopardita* lack claspers. They placed *Mirambulus* and *Megavescia* in two different subfamilies, unaware that these genera are synonyms. Wygodzinsky (1950) refuted the above points and stated that the "apical prolongation of the fore tibia beyond the insertion of the tarsus serves to distinguish all Vescinae."

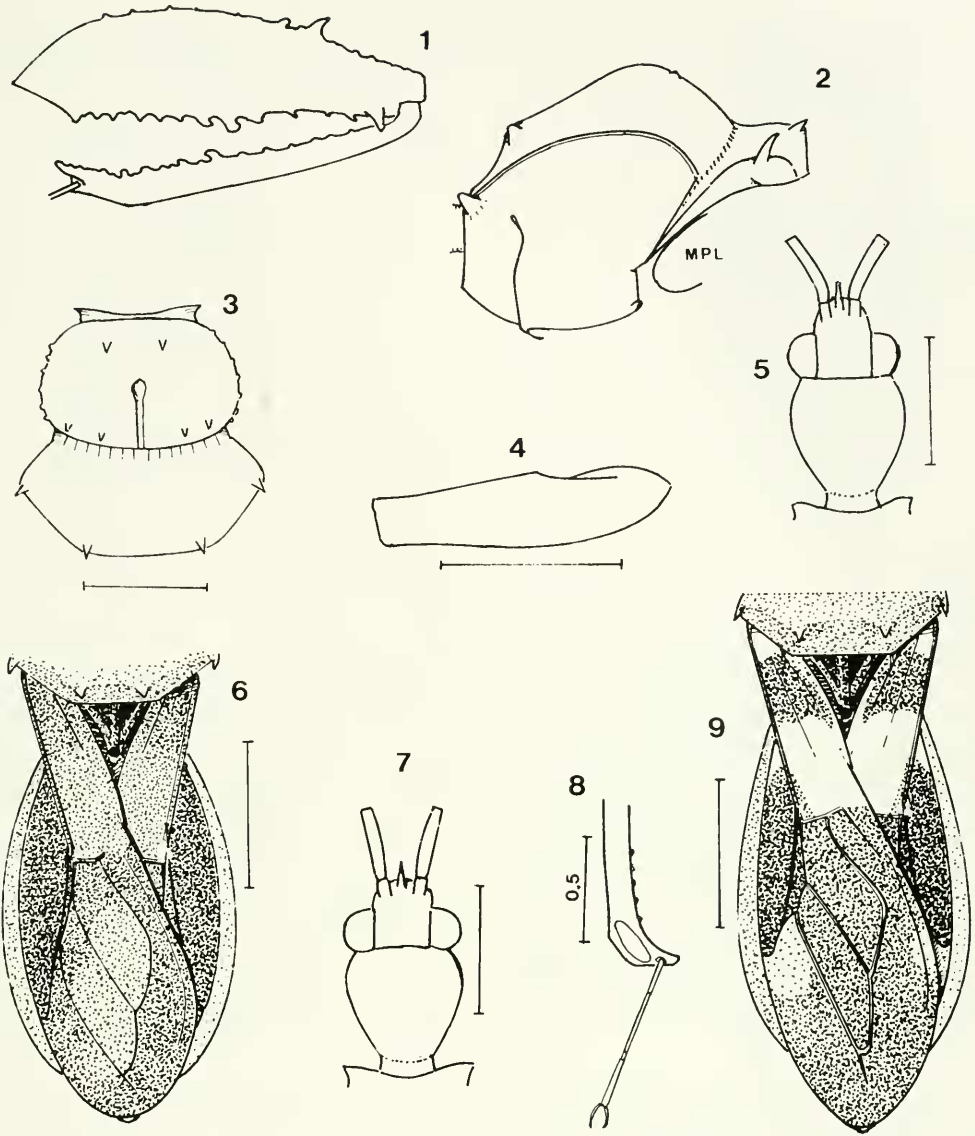
*Chopardita*, an African genus, is the only vescine outside the Neotropics. It is closely related to *Vescia*, an affinity that could be a result of fragmentation of Gondwanaland.

Measurements are in mm. The holotype of *Chopardita mimetica* is in the Paris Museum, France, and of *C. granulosa* in the Natural History Museum, London, England.

#### SUBFAMILY CHARACTERS IN VESCINAE

All genera have a flattened, glabrous area, demarcated or not by a carina, on the apical frontal face of the fore tibia. The carina may be triangular as in *Vescia* or oblong-ovate as in *Chopardita*. This area may include the insertion of the tarsi, as in *Vescia*, or the insertion may be apical to it as in *Chopardita*. This area may be related to the flexed position of the tarsi, but not for their reception, as the tarsi are longer (Fig. 8). It is in the same position as the furrow for the reception of the tarsi in some apiomerine genera. Some apiomerine genera lack this furrow and instead have a demarcation quite similar to that of *Chopardita*. In the apiomerines this sulcus or flat area occurs also in the middle tibia but in the vescines the flattened area is limited to the protibia.

In all vescine genera the apex of the fore tibia is extended and curved backward past the insertion of the tarsi (Figs. 1, 8). Their tarsi are filiform, between  $\frac{1}{2}$  (fore) and  $\frac{1}{3}$  (middle and hind) the length of the corresponding tibia (Figs. 18, 19). The first segment is the shortest, the last two subequal



Figs. 1-9. 1. *Mirambulus* sp., fore leg. 2 *Vescia* sp., pronotum and mesopleura (mpl), lateral view. *Chopardita mimetica* n. sp., female, 3. pronotum, dorsal view, 4. profemur, dorsal view. 5. head, dorsal view, 6. posterior margin of pronotum and abdomen, dorsal view. *Chopardita mira*, female, 7. head, dorsal view, 8. apex of fore tibia, frontolateral view, 9. posterior margin and abdomen, dorsal view.

or the third slightly longer than the second and twice as long as the first. The claws are long, tapering, unnotched basally.

A broad triangular gena is common to all genera (Fig. 13). Its blunt apex barely reaches the margin of the clypeus. Its upper margin ends below the antenniferous tubercle

and the lower above the upper margin of the buccula. Wygodzinsky gives a partial drawing of the gena of *Microvescia* (1943: 221, Fig. 87).

The pterostigma of the Heteroptera is a slightly chitinized, more or less expanded area, at the external end of the corium. It is

limited externally by C or Sc and internally by R. Both converge to form its apex. In Vescinae it is broader and longer than in all other subfamilies. In this subfamily it starts just past the level of the apex of the scutellum, notably widens, and ends about level with the apex of the inner membranal cell. Along its apical half R runs very close to the basal veins of the membranal cells (Figs. 6, 9).

In Vescinae, veins C and Sc are not visible from above on the basal third or fourth of the fore wings. The area they occupy is bent downward, vertical to the wing blade. Vein R consequently is the first lateral vein in this area. Vein R is much thicker than the other veins. Some species of *Euagoras* Burmeister, a typical harpactorine, have a thick R parallel to the normally located C and Sc, and the latter form a narrow and short pterostigma. The fore wings of the vescines narrow to about level of the apex of the scutellum, then broaden in an oval fashion. The connexivum is exposed starting from the level of the apex of the scutellum. The constriction is less marked in *Pessoaia*. *Oncerothelus* Stål and other saicines and the reduviine *Microlestria* Stål have a thick R that runs parallel to the costal margin and a relatively wide, but shorter pterostigma. The partially marginal, thick R vein and the long and wide pterostigma are characteristic of the vescine.

The subcircular, larger, anterior lobe and a shorter, apron-shaped, posterior lobe of the pronotum is similar in all vescine genera (Fig. 3). The anterior lobe is inflated in all genera except, *Chopardita*, but its pronotum has the typical vescine outline. The upper surface of the anterior lobe of the other genera is above the surface of the posterior lobe (Fig. 2). The conical spinules of the anterior lobe, usually two anterior and four posterior, and four anteapicals on the posterior lobe are in the same relative position in all genera (Fig. 3). In many reduviines a somewhat similarly shaped pronotum occurs, but

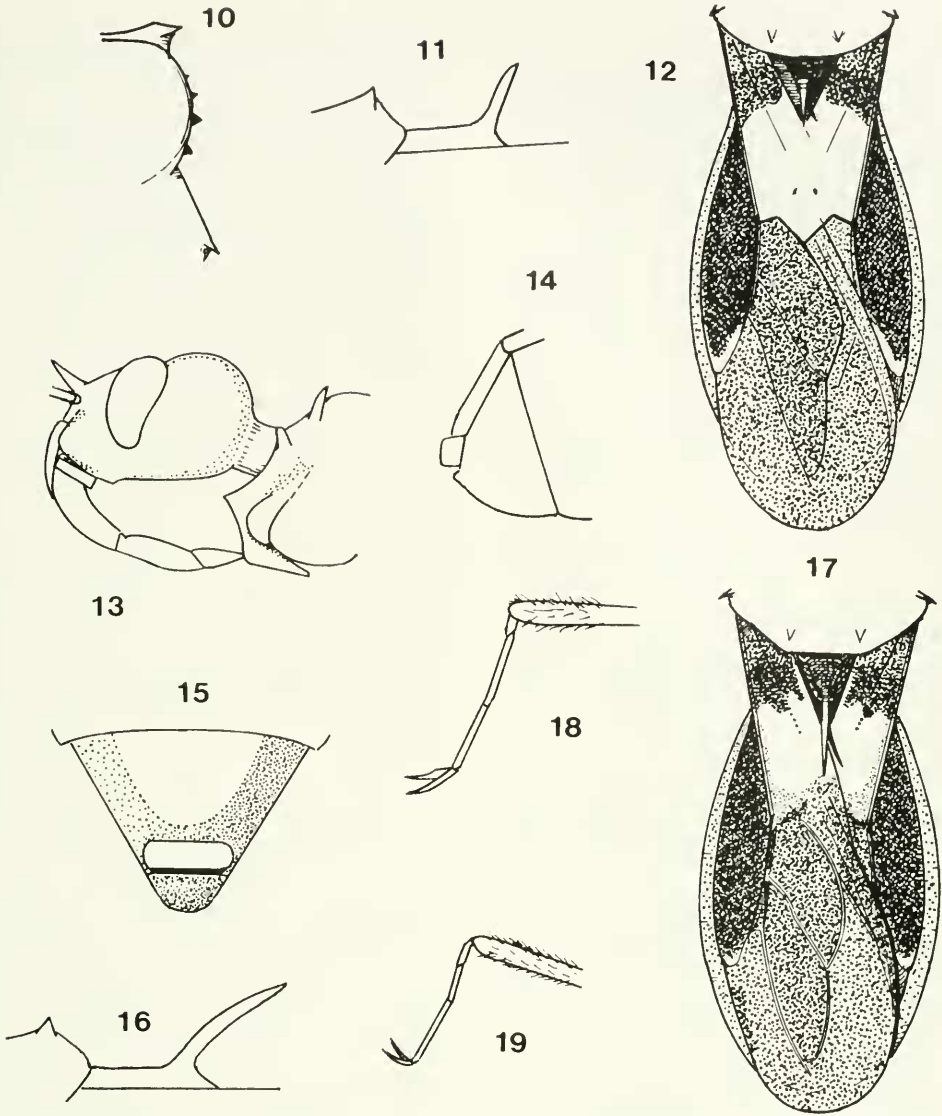
the anterior lobe is narrower, never inflated and the posterior lobe is spined differently. The inflated anterior lobe of the harpactorine *Notocyrtus* Burmeister is quite different and has no spinules. Longitudinal, short crenulations occur between both lobes of the pronotum in all vescines.

The basal half of fore femora is incrassate in all genera except *Pessoaia*. In the latter the tibiae tapers from a slightly broad base to apex. The basal half of the internal face of the fore tibia is flattened in *Vescia*, *Mirambulus*, and *Chopardita* only (Fig. 4), a character not present in other reduviids. Wygodzinsky noticed this character in *Mirambulus*. The middle and hind femora are straight, cylindrical in all vescine genera.

The armature of the anterior femora and tibiae of all vescines consists of teeth and round or spiniform tubercles, never spines (Figs. 1, 8). Middle and posterior femora are unarmed. The scutellar spine is preapical in all genera (Figs. 11, 16). Wygodzinsky (1943) noticed that the microspines of the coxae and trochanters of the fore legs are good specific characters.

The barrel-shaped fore coxae are about a third as long as the fore femora and not flattened laterally as they are in Peiratine. Elongate coxae is a relatively uncommon reduviid character. Emesines, bactrodines, and saicines also have long coxae but their overall shape is quite different from that of the vescines.

Vescine species are black, dark ferruginous or dark or pale brown. The coria may have an extensive pale area or be slightly ornamented with yellowish, ivory or whitish. The membrane is grayish or ferruginous, may have more or less extensive paler areas, and veins are brown usually. The connexivum can be either unicolorous, usually a shade of brown, or the segments may be brownish at middle and paler at sutures. The sutures separating the connexival segments are usually very tenuous (Figs. 12, 17).



Figs. 10–19. *Chopardita villiersi*, 10. pronotum, dorsal view, 11. scutellum, lateral view, 12. posterior margin of pronotum and abdomen, dorsal view. *Chopardita granulosa* n. sp., female holotype, 13. head, lateral view, 14. genital segments, lateral view, 15. genital segments, caudal view, 16. scutellum, lateral view, 17. abdomen, dorsal view. *Vescia* sp., 18. tarsi, hind leg, 19. tarsi, middle leg.

KEY TO THE GENERA IN VESCINAE

- |   |  |
|---|--|
| <p>1. Anteocular space shorter than postocular; first antennal segment longer than anteocular space (Fig. 5) . . . . . 2</p> <p>– Anteocular space longer than postocular; first antennal segment shorter than anteocular space . . . . . 4</p> | <p>2. Spine between antenniferous tubercles present; without ocelli . . . . . 3</p> <p>– Spine between antenniferous tubercles absent; ocelli present . . . . . <i>Mirambulus</i> Breddin 1901</p> <p>3. Anterior pronotal lobe not inflated, its surface level with that of posterior lobe, with 2 short, vertical anterior and four preapical spinules; longitudinal sulcus of anterior lobe begins at . . . . . 4</p> |
|---|--|



- midlength with an oval pit, reaching transverse constriction between lobes ..... *Chopardita* Villiers 1944
- Anterior pronotal lobe inflated subglobularly, surface above level of posterior lobe (Fig. 2), with or without anterior short spinules; longitudinal sulcus from behind collar to level of posterior spinules of same lobe, not reaching transverse constriction between lobes ..... *Vescia* Stål 1865
- 4. Head almost and pronotum glabrous, some species with few scattered setae, anterior lobe of pronotum with short spinules and fine corrugations; humeral angles spined or not; apex of prosternum reaching mesosternum ..... *Pessoaia* Costa Lima 1940
- Head and pronotum densely pilose; anterior lobe of pronotum without spinules and corrugations; humeral angles spined; apex of prosternum not reaching mesosternum ..... *Microvescia* Wygodzinsky 1943

THE GENERA AND SPECIES OF VESCINAE

For synonyms of species see Wygodzinsky (1949) or Maldonado (1990).

Miller (1951: 465) described *Eremovescia* and included it in Vescinae. Villiers (1954: 221) synonymized it with *Pasira* Stål, a Reduviinae. This genus occurs from Mauretania to the Canary Islands.

*Chopardita* Villiers

*Chopardita* Villiers 1944: 79. Type: *Chopardita mira* Villiers 1944: 80. Ivory Coast.

*Chopardita mira* Villiers

Villiers 1944: 80. Occidental Africa, Zaire, Oubanghi-Chari, Sudan. Figs. 7-9.

*Chopardita villiersi* China and Usinger

China and Usinger 1943: 509. Sudan. Figs 10-12.

*Chopardita mimetica* Maldonado,

NEW SPECIES

Figs. 3-6

Female.—Brown: head, first segment of rostrum, anterior femora and tibiae, posterior lobe of pronotum, abdomen ventral-

ly, connexivum above and below. Dark brown: anterior lobe of pronotum, scutellum, tubercles of fore femur and tibia. Pale brown: antenna, femora ventrally, middle and hind legs, second and third segments of rostrum. Hemelytra: basal angle and pterostigma blackish brown; inverted trapezoidal, dirty-yellow area from level of apex of scutellum, margined laterally and apically to base of inner cell of membrane by black R (Fig. 6); membrane gray, cells same color as pale area of corium, veins dark brown.

*Head:* length of anterior lobe 0.40, length of posterior lobe 0.62, greatest width of posterior lobe 0.59, depth of posterior lobe 0.59, interocular space 0.28, interantennal spine reaching one third of first antennal segment. Antennal segments: I. 0.43; II. 1.25; III and IV missing; glabrous. Thorax: anterior lobe—length 0.75, width 1.00, two anterior vertical spinules and 2+2 subapical triangular spinules irregularly spaced; lateral margin not carinate, with six small granules of equal size; posterior lobe: length 0.53, width 1.31, with 2+2 subapical triangular spinules. Legs—anterior femur (Fig. 4): incrassate basally, narrowing to apex, without thick laterosubapical tubercle, ventral tubercles small, in two irregular rows, internal face flattened; length 1.62, greatest thickness 0.50; tibia: curved and bent apically, length 1.53, with typical dorsal granules, tarsi missing; middle leg: femur length 1.56; tibia straight, length 1.72; hind leg: femur length 2.06, tibia straight, length 2.00. Scutellar spine broken, preapical. Hemelytra reaching apex of abdomen; pterostigma: length 1.28, width 0.37. Connexival sutures obsolete. Abdomen length 2.60, greatest width 1.53. Overall length 4.90.

Holotype-female, COTE D'IVOIRE, bords du Volta-rouge, december 1938, L. Chopard collector, in Paris Museum.

The holotype is the specimen misidentified as *Chopardita mira* by Villiers (1944: 80). It was compared by me with a specimen, correctly identified, from Republic of Tchad, Bas Chari, 13.viii.1963, environs du

Douglia, labeled by Villiers. My drawings of *C. mira* are from this latter specimen. Villiers did not declare paratypes any of these specimens. This species has the basal third of middle and hind femora, the rostrum, tibia, and apex of fore femora yellow; the abdomen is slightly longer and narrower (2.60:1.53::2.40:1.62), and the width across the eyes greater than across posterior lobe of head than in *C. mimetica* sp. nov. (0.66:0.53::0.62:0.59). In the latter species the anterior pale area of the hemelytra is limited laterally by R, whereas in *C. mira* the pale area reaches the lateral margins of the wing (Fig. 9). *C. mira* has a pale area on the membrane, caudad of the pterostigma, that is absent in *C. mimetica*.

*Chopardita villiersi* is pale brown. Differs from *C. mira* and *C. mimetica* by having three small spinules (Fig. 10) on the thinly carinate lateral margin of the anterior lobe of the pronotum, and a smooth vertex. The last two species have five or six lateral granules and their vertex is shagreen or smooth. These species are about 5.3 mm long.

***Chopardita granulosa* Maldonado,**

**NEW SPECIES**

**Figs. 13–17**

Female.—Black: anterior lobe of pronotum, scutellum, humeral angles of hemelytra, pterostigma, mesopleura, and metapleura. Brown: antenna, anterior lobe of head. Stramineous: second and third segments of rostrum, connexivum above, femora, scutellar spine. Sort of greenish brown: posterior lobe of pronotum, abdominal sterna. White: most of discal area of clavus. Gray: membrane, lateroposterior angles of white discal area.

Head.—minutely granulose, length 2.19, anteocular space 0.88 (to apex of head); postocular space 1.25, length of interantennal spine 0.38, length of eye 0.50; collum poorly defined, length 0.05; width across eyes 1.33, interocular space 0.56, width across widest part of posterior lobe 1.13. Antennae missing, only part of one first seg-

ment present. Rostral segments: I. 0.88; II. 0.94; III. 0.50. Pronotum-anterior lobe: globular, longitudinal sulcus beginning at midlength with a small pit, then deep to transverse constriction, margin with 6 or 7 minute granules, collar with angles projected laterally; with two vertical anterior and 2+2 posterior spinules; greatest width 1.94, length 1.50; posterior lobe: length 1.06, humeral width 2.75 (to base of spinules), finely corrugate and minutely, sparsely granulose; longitudinally crenulate between lobes. Meso- and metapleurae vertically rugose, sparsely granulose. Scutellum long triangular, basal width 0.44, length to base of spine 0.38, length to apex of spine 1.31. Abdomen: length to apex of genital segment 1.70, greatest width 2.25. Genital segments as in Figs. 14, 15. Total body length 5.39.

Holotype.—female, N. NIGERIA, Azar, 1928–1929, Dr. Ll. Lloyd collector; paratype same collection data, both in NMNH, London.

**KEY TO THE SPECIES IN *CHOPARDITA***

1. Lateral margin of anterior lobe of pronotum with three spinules; fore wings as in Fig. 12 . . . . . *C. villiersi* China and Usinger
- Lateral margin of anterior lobe of pronotum with 5–7 aligned small granules; fore wings not as in Fig. 12 . . . . . 2
2. Posterior lobe of head and posterior lobe of pronotum very finely granulose; fore wings as in Fig. 17 . . . . . *C. granulosa* Maldonado n. sp.
- Posterior lobe of head and posterior lobe of pronotum smooth or shagreen; fore wings as in Figs. 6 or 9 . . . . . 3
3. Femora bicolored; basal third and apex of femora, rostrum yellow; head pale brown; fore wings as in Fig. 9 . . . . . *C. mira* Villiers
- Femora unicolored, pale brown; first rostral segment pale brown, last two brown; head brown; fore wings as in Fig. 6 . . . . . *C. mimetica* Maldonado n. sp.

*Microvescia* Wygodzinsky

*Microvescia* Wygodzinsky 1943: 206, 220. Type: *Microvescia costalimai* Wygodzinsky 1943: 220. Brazil. Monotypic.

*Mirambulus* Breddin

- Mirambulus* Breddin 1901: 74. Ecuador.  
Type: *Mirambulus niger* Breddin 1901:  
75. Ecuador.  
*Megavescia* Wygodzinsky 1947: 414. Type:  
*Megavescia cazieri* Wygodzinsky 1947:  
412, 414. Guyana. Synonymized by Wy-  
godzinsky 1950: 266.

The genus includes:

- M. morio* Breddin 1903. Bolivia.  
*M. niger* Breddin 1901. Ecuador.

*Pessoaia* Costa Lima

- Pessoaia* Costa Lima 1940: 487. Type: *Pes-  
soaia piratoides* Costa Lima 1940: 487.  
Brazil. Abalos (1945) keyed the species.

- P. argentina* Wygodzinsky 1943. Argen-  
tina.  
*P. limai* Usinger 1942. Costa Rica, Co-  
lombia.  
*P. maculata* Wygodzinsky 1943. Brazil.  
*P. parkoi* Wygodzinsky 1943. Brazil.  
*P. piratoides* Costa Lima 1940. Brazil.

*Vescia* Stål

- Vescia* Stål 1866: 123. Type: *Vescia spicula*  
Stål 1866: 166. Brazil. In Acanthaspidi-  
nae.  
*Geaya* Villiers 1944: 81. Type: *Geaya di-  
latata* Villiers 1944: 81. Venezuela. Syn-  
onymized by China and Usinger (1948:  
603).  
Wygodzinsky (1943: 207) keyed five of  
the eight species.  
*V. adamanta* Brindley 1931. Guyana  
*V. angrensis* Seabra & Hathaway 1942.  
Brazil.  
*V. brachyptera* Usinger 1942. Paraguay.  
*V. dilatata* (Villiers) 1944. Venezuela.  
*V. minima* Fracker & Bruner 1924. Bra-  
zil.  
*V. nostratis* Drake and Harris 1945. Bra-  
zil.  
*V. penningtoni* Drake 1943. Paraguay,  
Brazil.  
*V. spiculata* Stål 1866. Brazil.

## ACKNOWLEDGMENTS

For the loan of specimens for study I am grateful to D. Plout-Sigwalt, National Museum of Natural History, Paris, France, and Mrs. J. Margerison-Knight, Department of Entomology, Natural History Museum, London, Great Britain.

## LITERATURE CITED

- Abalos, J. W. 1945. *Pessoaia alvaradoi* n. sp. Anales del Instituto de Medicina Regional, Tucumán 1: 229-237.  
Breddin, G. 1901. Neue tropische Wanzen und Zirpen. Societas Entomologica 16: 74-76.  
———. 1903. Über neue Paläotropische Reduviinen. Gesellschaft Naturforschender Freunde 3: 111-129.  
China, W. E. & R. L. Usinger. 1948. A new species of *Chopardita* from the Anglo-Egyptian Sudan with notes on the subfamily Vesciinae. Hemiptera Reduviidae. Annals and Magazine of Natural History (121): 598-604.  
Costa Lima, A. da. 1940. Novo Hemiptero da subfamilia Vesciinae. Revista do Museu Paulista 1: 485-490.  
Drake, C. J. 1943. A new neotropical vesciid (Hemiptera: Reduviidae). Boletín de entomología venezolana 2: 207-209.  
Drake, C. J. & H. M. Harris. 1945. Concerning the subfamily "Vesciinae." Revista Brasileira de Biologia 5: 155-156.  
Fracker, S. B. & S. C. Bruner. 1924. Notes on some Neotropical Reduviidae. Annals of the Entomological Society of America 17: 163-174.  
Haviland, Maud D. (Mrs. H. H. Brindley). 1931. The Reduviidae of Kartabo, Bartica District, British Guiana. Zoologica 7: 129-154.  
Maldonado Capriles, J. 1990. Systematic Catalogue of the Reduviidae of the World. Special Publication. Caribbean Journal of Science, University of Puerto Rico at Mayagüez. i-x, 1-694 pp.  
Miller, N. C. E. 1951. New Reduviidae in the collection of the British Museum (Natural History)—V. Annals and Magazine of Natural History (124): 465-480.  
Seabra, C. A. C. & C. R. Hathaway. 1942. Especies de *Vescia* del Brasil (Hemiptera: Reduviidae). Memorias del Instituto Oswaldo Cruz 37: 539-541.  
Stål, C. 1866. Hemiptera Africana, Vol. 3. Ofversigt Kongliga Akademiens Foerhandlingar 3: 1-200.  
Usinger, R. L. 1942. Key to genera and species of Vesciinae with description of two species (Hemiptera, Reduviidae). Revista de Entomologia 13: 290-296.

- Villiers, A. 1944. Note sur deux Réduviides africano-bresiliens constituant une nouvelle sousfamille. Bulletin de la Société Entomologique de France 49: 79-83.
- Wygodzinsky, P. 1943. Contribuição ao conhecimento da subfamília Vesciinae (Hemiptera, Reduviidae). Revista Brasileira de Biologia, 3: 203-223.
- . 1947. Sobre um novo genero neotropico de Vesciinae, com considerações sobre a subfamília (Reduviidae, Hemiptera). Revista de Entomología 18: 411-416.
- . 1949. Elenco sistemático de los reduviiformes americanos Instituto de Medicina Regional, Tucumán. Monografía. 1: 1-102.
- . 1950. On the genus *Mirambulus* Breddin, with general notes on the subfamily Vesciinae (Reduviidae, Hemiptera). Annals and Magazine of Natural History (12)3: 265-268.